

REMARKS

Claim Rejections 35 U.S.C. § 103 (a)

The Examiner has rejected claims 9, 10, and 16-28 under 35 U.S.C. § 103 (a) as being unpatentable over Uzoh et al. (US 5,807,165).

Applicant respectfully disagrees with the Examiner. Claim 9 was previously presented. Support is provided in paragraphs [0022] and [0023], both on page 8 of the specification.

Claim 9, as previously presented, of Applicant's claimed invention claims an apparatus (100) including: a platen (110); a polishing pad (120) located over the platen, the polishing pad having properties that may be changed to optimize polish rate and polish selectivity for different materials, the properties including: hardness, stiffness, porosity, abrasiveness, and absorbance; a segmented cathode (130) located between the platen and a rear surface of the polishing pad; a slurry (150) located on the polishing pad; a wafer (160) located on the polishing pad and the slurry; a wafer carrier (180) to hold the wafer; a segmented anode (170) located between a rear surface of the wafer (160) and the wafer carrier (180), the segmented anode being partitioned into small components that may be adjusted separately; a power supply (190) to apply a voltage between the segmented cathode and the segmented anode; and a computer (200), the computer to vary the voltage. See Figure 1.

In contrast, the Uzoh et al. reference cited by the Examiner teaches an apparatus (60) including a rotatable workpiece carrier (66), a plurality of workpiece electrodes (67E) disposed in a recess (R) of the carrier and in contact with a minor side (S) of the workpiece (W) or layer (18), a rotatable platen (62) attached to a rotatable shaft (68), a platen electrode (63) attached to the platen, a polishing pad

(64) mounted on the platen, a means for urging the carrier against the pad, a slurry supply system in fluid communication with the pad, and a source (80) to vary magnitude and polarity of current as a function of time. See Figures 7-9 and Figures 17A-17B. Also, see Col. 5, lines 44-51.

However, Uzoh et al. does not teach an apparatus including a segmented anode located between a rear surface of the wafer and a wafer carrier; the segmented anode being partitioned into small components (67E) that may be adjusted separately.

On the contrary, Uzoh et al. teaches against the present invention by teaching that an electrode portion (67E) contacts, and electrically connects to a minor side (12) of a conductor layer (18) or workpiece (W). See Figure 1A.

Despite the assertion of the Examiner, Applicant wishes to respectfully point out to the Examiner that a placement of an anode between a rear surface of a wafer and a wafer carrier constitutes a non-obvious element of Applicant's invention, as claimed in claim 9, as amended.

Applicant reiterates emphatically that this element of Applicant's claimed invention, as claimed in claim 9, as amended, is not merely a rearrangement as stated by the Examiner. Instead, this non-obvious element does, in fact, significantly affect and improve an operation of the claimed apparatus of Applicant's invention.

Thus, Uzoh et al. does not teach, suggest, or render Applicant's invention, as claimed in claim 9, obvious to one of ordinary skill in the art of making semiconductors, at the time the invention was made.

Claims 10 and 16-28 are dependent on claim 9, as amended, and are also not rendered obvious by Uzoh et al.

In view of the foregoing, Applicant respectfully requests the Examiner to withdraw the rejections to claims 9, 10, and 16-28 under 35 U.S.C. § 103 (a).

Applicant believes that all claims pending, including amended claim 9, are now in condition for allowance so such action is earnestly solicited at the earliest possible date.

Pursuant to 37 C.F.R. § 1.136 (a) (3), Applicant hereby requests and authorizes the U.S. Patent and Trademark Office to treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time.

Should any additional charge or fee, including extension of time fees and fees under 37 C.F.R. § 1.16 and § 1.17, be required, or otherwise needed, please charge Deposit Account No. 50-0221.

If a telephone interview would in any way expedite the prosecution of this application, the Examiner is invited to contact the undersigned at (408) 653-7897.

Respectfully submitted,
INTEL CORPORATION

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George Chen
Reg. No. 50,807

Intel Corporation
c/o Intellevate, LLC
P.O. Box 52050
Minneapolis, MN 55402